

ABSTRACT

A thermo optical type variable optical attenuator suitable for application in an array type variable optical attenuator that realizes low crosstalk between neighboring waveguides in the array is provided. A thermo optical type variable optical attenuator using optical material having negative optical effect provides a multimode optical propagating part 3 disposed via a tapered part 2 and a tapered part 7 between single mode optical waveguides 1 and 8. A thin-film heater 4 is disposed above the multimode optical propagating part 3 at an angle of inclination β in relation to the direction of light propagation along a first optical waveguide 50. Moreover, a second optical waveguide 9 optically coupled with a side face 3S1 of the multimode optical propagating part 3 is provided at an angle of inclination 2β in relation to the direction of light propagation along the first optical waveguide 50.